



The Soudan Underground Laboratory

Comments on MOU/SOW contents

Soudan Operations Review

Fermilab

May 14-15, 2003



The Operation MOU contents



- Introduction, brief history
- Management structure
 - UM role/responsibilities (including invoicing)
 - FNAL role/responsibilities (including PO's)
 - Duties of Lab Director (me), Supervisor(Bill)
 - Duties of Soudan Ops Manager (Gina)
- Laboratory Operation
 - Services provided
 - Staff funding
 - Infrastructure provided
 - Experiment operations/program



Invoicing



- Problems with invoicing at the U of MN:
 - If PO contains many WBS elements UM cannot invoice over the maximum for any single line. (Sample on next slide.)
 - Research Administration has to effectively “certify” that all expenses invoices are assigned to the correct line (i.e. WBS item) – causes angst and delay...
- Solution at FNAL:
 - “Over PO” each item to ensure full invoicing? Not a good solution.
 - Tender one-(or two-)line PO’s? Is lack of “control” a serious problem?
 - PO issuer (Gina) certifies by E-mail that invoice suggested by Jeff/Earl is correct and can be paid. This may work (has in past).



Sample: a “no go” invoice try



PO Item Description	WBS	Item #	Wk Pkg	PO Total	Prior Invoices	This Inv SFR#10	Balance Remaining
Support for MINOS Experiment for period 10/1/98 to 9/30/99		1	4YZU	314,900.00	314,900.00	0.00	0.00
SOUDAN/MINOS Operating - Mine Crew Support and General Operation for F		2	4YZU	329,000.00	329,004.00	0.00	(4.00)
WBS 2.4.2 Mine Crew Management Engineering Oversight	2.4.2	3	6YVB	66,043.00	0.00	32,001.81	34,041.19
WBS 2.4.3 Engineering Oversight of the Daily Activities	2.4.3	4	6YVC	66,936.00	63,694.18	0.00	3,241.82
WBS 2.4.3 Engineering Oversight of the Daily Activities	2.4.3	4	6YVD	29,568.00	0.00	0.00	29,568.00
WBS 2.4.4 Soudan Lab Infrastructure Setup	2.4.4	5	6YVD	52,510.00	1,471.60	121,679.22	(70,640.82)
WBS 2.4.6 DNR Cost	2.4.6	6	6YVF	10,144.00	5,697.19	0.00	4,446.81
WBS 4.1 PPD Soudan Lab Facility Base Operations	4.1	7	4NAK	142,822.00	67,481.99	161,189.21	(85,849.20)
WBS 4.2 PPD Soudan Lab Facility Infrastructure	4.2	8	4NAL	20,160.00	2,397.43	35,463.71	(17,701.14)
WBS 3.4.1 Mine Crew Support and Soudan General Operating	3.4.1	9	4YZU	128,547.00	31,074.48	97,472.52	0.00
WBS 3.4.2 Breitung Township Building Rental	3.4.2	10	4YZX	29,610.00	17,339.27	16,003.25	(3,732.52)
WBS 3.4.3 Earl Peterson Salary	3.4.3	11	4YZW	47,713.00	47,713.00		0.00
Breitung Township Building Rental	3.4.2	12	4YZX	27,766.00	20,186.72	7,579.28	0.00
DNR Cost	2.4.6	13	6YVF	5,072.00	0.00	0.00	5,072.00
E. Peterson Salary	3.4.3	14	4YZW	23,857.00	0.00	18,603.04	5,253.96
Mine Crew Support - General Operations	3.4.1	15	4YZU	50,186.00	0.00	6,409.10	43,776.90
Mine Crew Management	2.4.2	16	6YVB	32,683.00	0.00	0.00	32,683.00
PPD Soudan Lab Facility Base Operations	4.1	17	4NAK	69,558.00	69,558.00	0.00	0.00
PPD Soudan Lab Facility Infrastructure	4.2	18	4NAL	27,631.00	0.00	27,631.00	0.00
Soudan Lab Infrastructure Setup	2.4.4	19	6YVD	126,371.00	118,515.24	7,855.76	0.00
PO Totals				1,601,077.00	1,089,033.10	531,887.90	(19,844.00)



Budget: needs vs. allocation



- Potential problems:
 - What if the FNAL available resources are less than the anticipated laboratory budget needs?
 - Example: Gina/Earl say \$1.2M needed
 - But: John Cooper says \$1.0M is available
 - What if needs arise during a fiscal year that were unforeseen and unfunded?
 - Example: fiber-optic cable in shaft (network) is damaged accidentally
 - Example: DNR decides to use 500kW more power on 27th level, so new power cable down shaft is needed. (~100K\$+)
 - Example: UM Code officials decide that fire system needs an extensive upgrade (or electrical or ...)



Possible solutions



- Perhaps these budgets need a contingency allocation:
 - Not the norm for operating budgets
 - But this operation is close to a ‘project’...
 - Carry over from year to year, controls on utilization
- For “type 2” (i.e. infrastructure) problems an escrow fund is a useful tool:
 - Suggested many years ago
 - Not implemented yet
 - Unspent balance returned at end of operation
 - Alternative to not funding these may be loss of ability to operate the laboratory/experiments.



Programmatic expansion



- Already a small addition
 - (Ge crystal doing materials testing for Majorana experiment)
 - Separate small budget for supplies, labor costs
- Potentially much more:
 - Tomorrow's talk by Marvin Marshak
- All major expansion goes through the UM Soudan PMG
- If expansion is a FNAL-based experiment
 - Goes through the FNAL PAC
- If new expansion is not FNAL-based
 - (Presumably) approved by funding agency panel
 - May have impact on FNAL experiments at Soudan
 - Mechanism for FNAL approval (non PAC) is needed